

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. - 4. (Canceled)

5. (Currently amended) A method for assigning physical channels to time slots in a hybrid wireless time division multiple access/code division multiple access communication system, comprising the steps of:

providing physical channels for assignment;

providing a set of time slots for potential assignment;

arranging the set of time slots into a plurality of sequences based on a quality of each of the set of time slots, the quality of each time slot being based on in part an interference measurement and an allowed number of the provided physical channels to be assigned, the set of time slots being arranged into the plurality of sequences by varying weights associated with the interference measurement and the allowed number of physical channels associated with each of the set of time slots;

assigning the provided physical channels to the time slots of each sequence in a time slot order; and

~~The method of claim 4 wherein the set of time slots are arranged into a plurality of sequences by varying weights associated with the interference measurement and the allowed number associated with each of the set of time slots, and the assigning is performed on each sequence, the method further comprising:~~

for successfully assigned ones of the plurality of sequences, determining a highest quality ~~one of the successful ones~~ sequence based on in part an overall interference and fragmentation of the assigned sequences.

6. (Currently amended) The method of claim ~~[[4]]~~ 5 wherein the ~~arranging the set of time slots into the sequences~~ step uses a figure of merit for each slot of the set, ~~for each slot of the set, the figure of merit comprises~~ comprising an interference measurement difference between that slot and a minimum interference slot and an allowed number of physical channels for the provided physical channels in that time slot.

7. (Currently amended) The method of claim 6 wherein the set of time slots are arranged into ~~[[a]]~~ the plurality of sequences by varying weights associated with the interference measurements differences and the allowed number of physical channels, and the assigning step is performed on each sequence, the method further comprising the step of:

for successfully assigned ones of the plurality of sequences, determining a highest quality ~~one of the successful ones~~ sequence based on in part an overall interference and fragmentation of the assigned sequences.

8. (Canceled)

9. (Currently amended) A method for assigning downlink physical channels to time slots in a hybrid wireless time division multiple access/code division multiple access communication system, comprising the steps of:

providing physical channels for assignment;

providing a set of time slots for potential assignment;

arranging the set of time slots into a plurality of sequences based on a quality of each of the set of time slots, the quality of each time slot being based on in part a transmit power of that slot and an allowed number of the provided physical channels to be assigned, the set of time slots being arranged into the plurality of sequences by varying weights associated with the transmit power and the allowed number of physical channels associated with each of the set of time slots;

assigning the provided physical channels to the time slots of each sequence in a time slot order; and

~~The method of claim 8 wherein the set of time slots are arranged into a plurality of sequences by varying weights associated with the transmit power and the allowed number associated with each of the set of time slots, and the assigning is performed on each sequence, the method further comprising:~~

for successfully assigned ones of the plurality of sequences, determining a highest quality ~~one of the successful ones~~ sequence based on in part an overall interference and fragmentation of the assigned sequences.

10. (Currently amended) The method of claim [[8]] 9 wherein the arranging ~~the set of time slots into the sequences~~ step uses a figure of merit for each slot of the set, ~~for each slot of the set, the figure of merit comprises~~ comprising a transmit power difference between that slot and a minimum transmit power slot and an allowed number of physical channels for the provided physical channels in that time slot.

11. (Currently amended) The method of claim 10 wherein the set of time slots are arranged into [[a]] the plurality of sequences by varying weights associated with the transmit power differences and the allowed number of physical channels, and the assigning step is performed on each sequence, the method further comprising the step of:

for successfully assigned ones of the plurality of sequences, determining a highest quality ~~one of the successful ones~~ sequence based on in part an overall interference and fragmentation of the sequences.

12. - 15. (Canceled)

16. (Currently amended) A radio network controller (RNC) for use in a hybrid wireless time division multiple access/code division multiple access communication system, the RNC assigning a set of physical channels to a set of time slots, the RNC comprising:

a radio resource management (RRM) device for:

arranging the set of time slots into a plurality of sequences based on a quality of each of the set of time slots, the quality of each time slot being based on in part an interference measurement and an allowed number of the provided physical channels to be assigned, the set of timeslots being arranged into the plurality of sequences by varying weights associated with the interference measurements and the allowed number of physical channels associated with each of the set of time slots;

assigning the set of physical channels to the time slots of each sequence in a time slot order; and

~~The RNC of claim 15 wherein the set of time slots are arranged into a plurality of sequences by varying weights associated with the interference measurements and the allowed number associated with each of the set of time slots, and the assigning is performed on each sequence, the method further comprising:~~

for successfully assigned ones of the plurality of sequences, the RNC determining determines a highest quality ~~one of the successful ones~~ sequence based on in part an overall interference and fragmentation of the assigned sequences.

17. (Currently amended) The RNC of claim ~~[[15]]~~ 16 wherein the arranging the set of time slots into the plurality of sequences uses a figure of merit for each slot of the set, ~~for each slot of the set~~, the figure of merit ~~comprises~~ comprising an interference measurement difference between that slot and a minimum interference slot and an allowed number of physical channels for the set of physical channels in that time slot.

18. (Currently amended) The RNC of claim 17 wherein
the set of time slots are arranged into ~~[[a]]~~ the plurality of sequences by varying weights associated with the interference measurement differences and the allowed number of physical channels, ~~and~~
the assigning is performed on each sequence, and

~~the RNC further~~ for successfully assigned ones of the plurality of sequences, ~~the RNC determining~~ determines a highest quality ~~of one of the successful ones~~ sequence based on in part an overall interference and fragmentation of the assigned sequences.

19. (Canceled)

20. (Currently amended) A radio network controller (RNC) for use in a hybrid wireless time division multiple access/code division multiple access communication system, the RNC assigning a set of downlink physical channels to a set of time slots, the RNC comprising:

a radio resource management (RRM) device for:

arranging the set of time slots into a plurality of sequences based on a quality of each of the set of time slots, the quality of each time slot being based on in part a transmit power of that slot and an allowed number of the provided physical channels to be assigned, the set of time slots being arranged into the plurality of sequences of varying weights associated with the transmit power and the allowed number of the provided physical channels associated with each of the set of time slots;

assigning the set of physical channels to the time slots in a time slot order of the sequence; and

~~The RNC of claim 19 wherein the set of time slots are arranged into a plurality of sequences of varying weights associated with the transmit power and the allowed number associated with each of the set of time slots, and the assigning is performed on each sequence, the RNC for successfully assigned ones of the plurality of sequences, the RNC ~~determining~~ determines a highest quality ~~one of the successful ones~~ sequence based on in part an overall interference and fragmentation of the assigned sequences.~~

21. (Currently amended) The RNC of claim 20 wherein the arranging the set of time slots into the plurality of sequences uses a figure of merit for each slot of the set, ~~for each slot of the set, the figure of merit comprises~~ comprising a transmit power difference between that slot and a minimum transmit power slot and an allowed number of physical channels for the set of physical channels in that time slot.

22. (Currently amended) The RNC of claim 21 wherein

the set of time slots are arranged into [[a]] the plurality of sequences by varying weights associated with the transmit power differences and the allowed number of the provided physical channels, and

the assigning is performed on each sequence, and

~~the RNC for successfully assigned ones of the plurality of sequences, the RNC determining~~ determines a highest quality one of the successful ones sequence based on in part an overall interference and fragmentation of the sequences.

23. - 26. (Canceled)

27. (Currently amended) A radio network controller (RNC) for use in a hybrid wireless time division multiple access/code division multiple access communication system, the RNC assigning a set of physical channels to a set of time slots, the RNC comprising:

arranging means for arranging the set of time slots into a plurality of sequences based on a quality of each of the set of time slots, the quality of each time slot being based on in part an interference measurement and an allowed number of the provided physical channels to be assigned, the set of time slots being arranged into the plurality of sequences by varying weights associated with the interference

measurement and the allowed number of the provided physical channels associated with each of the set of time slots;

assigning means for assigning the set of physical channels to the time slots of each sequence in a time slot order; and

~~The RNC of claim 26 wherein the set of time slots are arranged into a plurality of sequences by varying weights associated with the interference measurement and the allowed number associated with each of the set of time slots, and the assigning is performed on each sequence, the method further comprising:~~

~~for successfully assigned ones of the sequences, determining means for determining a highest quality ~~one~~ sequence of the ~~successful~~ successfully assigned ones of the plurality of sequences based on in part an overall interference and fragmentation of the assigned sequences.~~

28. (Currently amended) The RNC of claim [[26]] 27 wherein the arranging means arranges the set of time slots into the plurality of sequences ~~uses~~ by using a figure of merit for each slot of the set, ~~for each slot of the set,~~ the figure of merit ~~comprises~~ comprising an interference measurement difference between that slot and a minimum interference slot and an allowed number of physical channels for the set of physical channels in that time slot.

29. (Currently amended) The RNC of claim 28 wherein
the arranging means arranges the set of time slots ~~are arranged~~ into [[a]] the
plurality of sequences by varying weights associated with the interference
measurement differences and the allowed number of physical channels, and
the assigning ~~is performed~~ means operates on each sequence, ~~the RNC~~
~~further comprising:~~
~~means for successfully assigned ones of the sequences, for determining a~~
~~highest quality one of the successful ones based on in part an overall interference~~
~~and fragmentation of the assigned sequences.~~

30. (Canceled)

31. (Currently amended) A radio network controller (RNC) for use in a
hybrid wireless time division multiple access/code division multiple access
communication system, the RNC assigning a set of downlink physical channels to a
set of time slots, the RNC comprising:
arranging means for arranging the set of time slots into a plurality of
sequences based on a quality of each of the set of time slots, the quality of each time
slot being based on in part a transmit power of that slot and an allowed number of
the provided physical channels to be assigned, the set of time slots being arranged

into the plurality of sequences of varying weights associated with the transmit power and the allowed number of the provided physical channels associated with each of the set of time slots;

assigning means for assigning the set of physical channels to the time slots of each sequence in a time slot order; and

~~The RNC of claim 30 wherein the set of time slots are arranged into a plurality of sequences of varying weights associated with the transmit power and the allowed number associated with each of the set of time slots, and the assigning is performed on each sequence, the RNC for successfully assigned ones of the sequences, determining means for determining a highest quality of one sequence of the successful successfully assigned ones of the plurality of sequences based on in part an overall interference and fragmentation of the assigned sequences.~~

32. (Currently amended) The RNC of claim 31 wherein
the arranging means arranges the set of time slots ~~are arranged~~ into [[a]] the plurality of sequences by varying weights associated with the transmit power differences and the allowed number of physical channels, and

the assigning ~~is performed~~ means operates on each sequence, ~~the RNC further comprising:~~

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~~means for successfully assigned ones of the sequences, for determining a highest quality one of the successful ones based on in part an overall interference and fragmentation of the sequences.~~